

## STATE OF NEVADA

JIM GIBBONS  
*Governor*

MICHAEL J. WILLDEN  
*Director*



RICHARD WHITLEY, MS  
*Administrator*

MARY GUINAN, MD, PhD  
*State Health Officer*

### DEPARTMENT OF HEALTH AND HUMAN SERVICES HEALTH DIVISION

4150 Technology Way, Suite 300  
Carson City, Nevada 89706  
Telephone: (775) 684-4200 · Fax: (775) 684-4211

## Nevada State Health Division Technical Bulletin

### Healthcare Provider Update on Disinfection and Sterilization

The first annual report recently published by the Nevada State Health Division's Bureau of Health Care Quality and Compliance (BHCQC) showed that our state has significant deficiencies in the area of infection control and prevention. This report specifically identified **sterilization and disinfection** as the most significant cause of concern for potential healthcare associated-infections and outbreaks at ambulatory surgery centers in Nevada.

Changes in the health care delivery system and increasing capabilities to perform outpatient surgery procedures have resulted in more patients receiving health care in nonhospital settings. Unfortunately, in these settings, infection control resources and oversight have traditionally been lacking. According to the National Centers for Disease Control and Prevention (CDC), in the United States approximately 46.5 million surgical procedures, including about five million gastrointestinal endoscopies, are performed each year. All such surgical procedures involve a direct or indirect contact of a medical device or surgical instrument with a patient's sterile blood, tissue or mucous membranes. Surgical procedures inherently involve major risks, especially when performed using inadequate antiseptic and aseptic measures and/or when poor disinfection and sterilization techniques are used. These inadequate infection prevention measures can lead to the introduction of unnecessary pathogens that may result in infections and other complications.

Failure to properly disinfect or sterilize equipment carries not only risk associated with breach of host barriers but also the risk for person-to-person transmission of disease and potential contamination with environmental, often hard-to-manage, serious pathogens (e.g. *Pseudomonas aeruginosa*).

Disinfection and sterilization are essential for ensuring that medical and surgical equipment and instruments do not transmit infectious biological agents to patients. However, because sterilization of all patient-care items is not always necessary, health-care policies in each surgery center must clearly identify, primarily on the basis of the item's intended use, whether cleaning, disinfection, or sterilization is indicated. Trained, reliable and certified infection prevention specialists in each facility should perform and supervise disinfection and sterilization procedures.

It is puzzling and disturbing that after experiencing a major blood-borne disease outbreak associated with unsafe injection practices in Las Vegas in 2008, inadequate disinfection and sterilization practices continue to occur. Recent inspections conducted by the BHCQC have documented an alarming level of non-compliance with well established guidelines to prevent infections. Sterilization and disinfection were the most frequently identified infection breaches and concerns, accounting for almost half of all deficiencies observed at the Ambulatory Surgery Centers.

One of the most essential goals of surgical best practices is to prevent surgical infections. These post surgical infections can be triggered by pathogens spread from inadequately disinfected and sterilized surgical instruments, skin flora at the incision site, bacterial cross-contamination, or by surgical hypothermia.

The failure to comply with scientifically-based guidelines on proper disinfection and sterilization and the lack of compliance with infection prevention and control principles has led to numerous national infectious disease outbreaks that could have been avoided. Preventing the transmission of infections related to the use of invasive surgical instruments and medical devices continues to be a significant concern to infection control practitioners, healthcare professionals and the public health system in Nevada and nationwide.

The Nevada State Health Division and the CDC continue to emphasize the immediate needs for regular and ongoing training to enhance healthcare workers' awareness of proper disinfection and sterilization procedures.

On November 18, 2008, the CDC issued updated disinfection and sterilization guidelines in a comprehensive document that includes information critical to the prevention of healthcare associated infections. These new guidelines replace those issued in 1985 and contain several updated and enhanced disinfection and sterilization concepts. Comprehensive information on the 2008 disinfection and sterilization guidelines can be found online at the CDC website:

[http://www.cdc.gov/ncidod/dhqp/pdf/guidelines/Disinfection\\_Nov\\_2008.pdf](http://www.cdc.gov/ncidod/dhqp/pdf/guidelines/Disinfection_Nov_2008.pdf)

For additional Nevada-specific information, to review the report of the BHCQC, and to learn about opportunities for training on best practices to prevent and control healthcare associated infection, please visit the Nevada State Health Division's website at: <http://health.nv.gov/>

In conclusion, regardless of the surgical procedure level and/or complexity, or the healthcare settings where surgical or other invasive procedures are performed, it is strongly recommended that all healthcare providers continue to adhere to all principles of disinfection and sterilization. All healthcare providers must accurately apply sound antiseptic and aseptic techniques before, during, and after any procedure whether is as minor or simple as safe injection practices.



Approved by: \_\_\_\_\_  
Ihsan A. Azzam, MD, MPH, State Epidemiologist, Nevada State Health Division